CIP White Paper

Department Name: ___SPU – Solid Waste Fund____

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Section 1 - Overview

Seattle Public Utilities (SPU) is responsible for the collection and disposal of solid waste generated within the City of Seattle. To fulfill this responsibility the City owns major capital facilities, including two recycling and disposal stations, also known as transfer stations, and two household hazardous waste facilities, and a fleet of trucks and heavy equipment. In addition, the Solid Waste Capital Improvement Plan (CIP) supports post-closure projects on two landfills previously used by the City.

Funding for Solid Waste capital projects comes predominantly from rates charged to customers whose trash, recycling, and composting are handled by the City's solid waste infrastructure and services. Solid waste rates were adopted by Council in 2010 for the period 2011-2012, and support the 2012-2017 Proposed CIP.

Section 2 - Summary of Upcoming Budget Issues and Challenges

Planned spending in the Solid Waste CIP is $166.2 million over the next six years. By far the largest projects over this time period are construction of a new south transfer station in 2012 and a new north transfer station between 2012 and 2015, and construction of a new recycling/re-use facility on the grounds of the old south transfer station between 2015 and 2017. These projects comprise roughly two thirds of the total CIP. Other significant projects are the South Park Development project, which funds the investigation and safe closure of the old South Park Landfill, and replacement of the South Household Hazardous Waste facility.

The north transfer station in Wallingford and the south transfer station in South Park are at the end of their useful lives. Built in the mid-1960s, both transfer stations have experienced close to half a century of hard industrial use that has worn out the buildings considerably and caused significant increases in ongoing maintenance of electrical and other systems. The aged stations are not designed for likely future earthquakes, are overcrowded given the size of Seattle's current population, and have limited space for recycling. The new South Transfer station will finish construction in 2012. The new north transfer station will likely be completed in 2014.

Completing both station rebuild projects at a time of slowing revenue growth poses a financial challenge to the utility. Revenues have been slowing since 2008 due to the economic downturn, which has negatively impacted the volume of waste and recyclables, the number of accounts, and prices for recyclable materials. For more information, please see Section 7 – CIP Revenue Sources.

As of summer 2011, construction on the south transfer station was well underway. About $20 million worth of spending planned for 2012 in the 2011-2016 CIP was moved into 2011 during that year, reflecting the latest construction phasing. The 2012-2017 Proposed CIP reflects this funding shift.

The original schedule for the north transfer station has been extended somewhat in the 2012-2017 Proposed CIP. SPU staff worked closely during 2010 and 2011 with a stakeholder group to develop a

preferred conceptual layout for the new north station. After an 11-month process during which the project team met with stakeholders to share a variety of design alternatives and obtain their feedback, in June 2011 the stakeholders provided SPU with their recommendations for a preferred conceptual layout. SPU has accepted the stakeholder recommendations.

The schedules for the cleanup of the South Park landfill and the redevelopment of the existing transfer station as a recycling/re-use center in the Solid Waste CIP are dependent on the construction schedule for the north transfer station project. The demolition of the older south transfer station will not occur until the north transfer station is rebuilt. This will allow the older south transfer station to be kept open along with the new south transfer station during the period when the north transfer station is closed for construction. SPU is deliberately sequencing construction to ensure that two transfer stations are open at all times to accommodate anticipated volumes of solid waste from residents and businesses in Seattle. Once the north transfer station has been rebuilt, and the new north and south transfer stations are both on line, the existing south transfer station will be demolished. Following demolition, landfill closure as defined by the South Park Landfill Cleanup Action Plan will be completed on the existing south transfer station property.

The remediation of the historic landfill in the South Park neighborhood poses another challenge for Solid Waste CIP planners. From the early 20th Century until the mid 1960s, a landfill was located in the South Park neighborhood near the location of the older south transfer station. SPU previously operated the landfill and owns a portion of the site. Thus the City is among the potentially liable parties in the clean up. The final cost allocation among parties will not be known until later in the project. In addition, the scope of the remediation has yet to be finalized. Thus total project costs and timing are difficult to accurately estimate at this time.

Section 3 - Thematic Priorities

The SPU Solid Waste Fund has two main priorities: a) managing environmental issues and regulatory requirements related to current and historic Solid Waste facilities, and b) protecting human health and safety. The Mayor's Walk Bike Ride initiative is also supported through design elements of the two transfer station projects.

Managing environmental issues and regulations: SPU is required to improve former landfill sites and take action as necessary when conditions change. For instance, underground gas levels at these sites are monitored and when high gas levels are detected, SPU implements improvements to extract the excess gas or otherwise mitigate the environmental impacts of the increase. Also, the new transfer stations will greatly reduce the environmental impacts of the existing stations on neighboring communities.

Protecting human health and safety: As mentioned above, the two transfer stations are at the end of their useful lives. Safety standards at these older facilities will be greatly enhanced once the rebuilds are complete. The end result will be greater safety for the public as well as SPU employees. Well-functioning and efficient transfer stations are part of a solid waste collection system that protects human health.

Walk Bike Ride: The new South Transfer Station will include a trail on the east side of the property as a community benefit associated with the street vacation. This trail will create a link in the corridor between South Park and the Alki neighborhoods. The recommended concept for the rebuilding of the

North Transfer Station includes separated traffic, a separate recycling building and approximately 44,000 square feet of publicly accessible green space. SPU is currently engaging with a group of neighbors to help program the green space.

Section 4 - Project Selection Criteria

SPU's capital planners identify candidate CIP projects through an awareness of ongoing planning processes (e.g., comprehensive plans, program plans), external projects and opportunities, and emergencies or other unexpected events that indicate specific investments are possibly recommended. SPU's Asset Management system then provides rigorous analysis of projects, by using a business case process that establishes whether a problem or opportunity is timely and important, and that the proposed solution is superior to alternatives based on a triple bottom line analysis (economic, environmental and social) of life cycle costs and benefits – or is a "must do" project (e.g., required by regulation).

After candidate projects have been identified, SPU prioritizes projects for inclusion in the CIP based on the following set of criteria:

- **Regulatory Mandates, Legal Agreements:** The degree to which the project is driven by federal, state, and local laws, permit and regulatory requirements, and consent decrees; as well as by legal agreements with public and private parties. Examples of highly ranked projects in this category include the South Park Development and Kent Highlands and Midway Landfill programs.

- **External Drivers:** SPU's responsiveness to, or engagement with, the projects of other Departments or Jurisdictions, and the specific mandates of the City Council and Mayor. Examples of highly ranked projects in this category include the 1% for Arts program.

- **Infrastructure:** How a project addresses infrastructure conditions or vulnerabilities. Examples of highly ranked projects in this category include the north and south transfer station rebuild projects.

- **Level of Service:** The importance of this project in providing or improving services to customers. Examples of highly ranked projects in this category include the north and south transfer station rebuild projects as well as the Household Hazardous Waste Relocation project.

- **Other Factors:** Other important factors, such as whether a project has social or environmental benefits not otherwise captured; is already in progress or near completion; represents a limited time opportunity; has community visibility; or has outside funding. Examples of highly ranked projects in this category include the 2010 Solid Waste Comp Plan Update.

Every project is rated against each criterion; criteria ratings are then considered in determining an overall project priority ranking, using expert judgment. Priority rankings for the CIP are determined by the leads for each Line of Business, with review by key internal stakeholders. The ranking scheme and criteria are the same for all Lines of Business, and are approved by the SPU Director and Asset Management Committee.

Project priority rankings are used to clarify and document which projects are most important and why, to help determine which projects will be included, excluded or deferred from the CIP, and which projects should receive priority attention if a staff or financial resource constraint should arise. This process can also result in project scope changes, as more cost-effective approaches to meeting the business need are identified. For example, the Kent Highlands Storm Drain Repair project was re-scoped based on the closer analysis and review. Rather than replacing approximately 600 lineal feet of pipe, the project was reduced to the replacement of 80 feet of failing pipe. Costs were reduced from over $700,000 to under $80,000.

Section 5 - Aligning Infrastructure with Planned Growth

The City's Comprehensive Plan incorporates the Solid Waste six year CIP by reference to provide the infrastructure needed for the solid waste system. In addition, investments in solid waste infrastructure support the Comprehensive plan's sustainability and zero waste goals.

The City's transfer stations are a part of a comprehensive waste management system that aims to accommodate population growth while still reducing the overall amount of solid waste sent to landfills. The transfer stations balance the capital cost of station construction versus convenience and collection cost minimization. This is reflected in optimizing a north end transfer station and a south end transfer station as opposed to one central mega station or multiple neighborhood based stations.

The South Park Development project will result in an approved cleanup of the historic landfill and put approximately 20 acres of unused property back into productive use and create economic opportunities adjacent to the South Park Urban Village.

SPU's service options reflect the City's urban village strategy. SPU now provides multi-family dwelling, dumpster-based collections for recycling, waste and organics, as well as the more traditional single family, can-based collections. Also, more intensive downtown residential use has led to the development of the Clear Alley (aka Dumpster Free Alley) Program.

Section 6 - Future Projects/What is on the Horizon

In the seven years prior to the initiation of the transfer station rebuild projects, the core Solid Waste CIP Budget averaged $4.7 million annually. During the years when the transfer station rebuild projects are included in the budget, planned spending in the core Solid Waste CIP averages $22 million annually. However, once these investments are made and the transfer stations are completed, the Solid Waste CIP is expected to return to lower, historical spending levels.

For example, once the North and South Transfer Stations are rebuilt, capital investments in station maintenance will be decreased. The current stations are at the end of their useful lives and thus require major improvements each year to keep them operational and safe for the public and the SPU employees who work there. Upon completion of the new stations, costs for annual repairs and upkeep are projected to decrease initially and then increase as equipment replacement/ renewal projects are required on the three facilities.

Section 7 - CIP Revenue Sources

SPU's Solid Waste CIP is funded largely by solid waste ratepayers. SPU issues bonds, serviced by ratepayers, and these bonds fund up to 90% of the CIP. The remainder of the CIP is funded by cash. SPU also actively seeks grants, low interest loans, and other funding sources whenever possible. The Solid Waste Utility has been under financial stress since 2008 as a result of the economic downturn, which curbed the volume of waste and recyclables, and caused prices for recyclable materials to dip considerably for several months. As a result, reductions to customer education, community waste prevention grants, and enforcement for recycling requirements were implemented in the 2010 and 2011 operating budgets. In addition, rate increases were instituted in 2010 for the period 2011-2012, and included increases for the average residential customer of 6.5% or $2.25 per month in 2012. The rate increases were a response to declining volumes and the capital investments required to rebuild the City's two transfer stations.

Section 8 - CIP Spending by Major Category

CIP Spending by Major Category – 2012-2017 Proposed CIP
(Amounts are in thousands of dollars)

Solid Waste Fund	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
New Facilities	$13,845	$11,322	$45,822	$36,301	$25,481	$2,429	$135,200
Rehabilitation & Heavy Eqpmt	$397	$224	$42	$54	$44	$45	$806
Shared Cost Projects	$2,536	$2,208	$1,954	$1,918	$2,126	$1,530	$12,272
Technology	$1,665	$4,334	$5,126	$2,658	$2,042	$2,069	$17,894
Total	**$18,443**	**$18,088**	**$52,944**	**$40,930**	**$29,693**	**$6,073**	**$166,172**

New Facilities: This program plans, designs, and constructs new facilities to enhance solid waste operations. The key project drivers of the New Facilities budget category are the north and south transfer station rebuild projects.

Schedule shifts have caused the New Facilities BCL to decrease by $21.6 million in 2012 and $21 million in 2013 compared to amounts planned for those years in the 2011-2016 Adopted CIP. As noted above, $19.9 million in funding originally planned for 2012 for the south transfer station was shifted into 2011 to support current construction timing. The schedule for the north transfer station has been moved out by roughly a year, so that expenditures previously planned for 2012-2014 are now expected between 2013 and 2015.

In terms of total project costs, the south transfer station's total budget is currently estimated to be roughly $6 million lower than in the 2011-2016 Adopted CIP, primarily due to savings in preparing the site for construction. In contrast, as a result of updated cost estimates including final contingency amounts and the new preferred design concept as recommended by stakeholders and approved by SPU, the north transfer station cost estimates have increased by just under $12 million.

Rehabilitation and Heavy Equipment: This program designs and constructs projects to repair and/or upgrade solid waste facilities. The key driver of this budget category is the Kent Highlands Landfill program. Landfill improvements include replacement of existing flares, drainage improvements, groundwater protection and water treatment as required by State environmental policy.

Most of the changes in this BCL are related to the deferral of the Kent Highlands North Pond Diversion project, which has experienced delays obtaining Department of Health approval.

Shared Cost Projects: This program includes individual capital improvement projects which typically benefit multiple Lines of Business (e.g., the Water line of business and the Drainage and Wastewater line of business) and whose costs are "shared," or paid for, by more than one of SPU's utility funds.

The Shared Cost Projects BCL proposed budget increased by $241,000 in 2012 and $110,000 in 2013. The key drivers are shifts in the Heavy Equipment Purchases project based on the completion schedule for the south transfer station and the addition of the new SWF SCADA program to monitor flare performance at the closed landfills, which was not in the previously Endorsed amounts.

Technology: This program category is presented in the separate “Technology CIP” section of SPU’s 2012-2017 Proposed CIP. The 2012-2017 Proposed CIP reduces technology CIP spending by 10% annually, which is equivalent to a $1.37 million reduction compared to the 2012 Endorsed Budget in the 2011-2016 Adopted CIP. The Solid Waste Utility’s share of the 2012 Technology CIP reduction is 35% or $473,000 based on the Solid Waste Utility’s share of benefit from these projects. SPU will focus technology spending on the highest priority business needs. These include utility asset management (Maximo Upgrade/Asset Data Initiative), budget and financial management (Budget Planning and Forecasting, Financial Data Mart), customer service improvements (Web Application Redesign, online chat & contact tools), and project delivery (Enterprise Project Management System). Other technology investments will be cancelled or deferred as a result of this funding reduction, which is part of a set of initiatives intended to continue restraining costs across the utility.